PATHWAY OF INFECTION - FAECES TO MOUTH

People get sick because of microbes which attack the body. These microbes must find a pathway to get into the body. The most common pathway is for microbes to enter the body on things contaminated by faeces. There are many microbes in faeces. These can enter a person's body when that person eats, drinks or sucks something which is contaminated with faeces, for example food, water or a child's dirty fingers. Many diseases are caused through this pathway. for example diarrhoea (see page 18)), polio (see page 27) and worm infections (see page 24).

THE CAUSES OF INFECTION BY THE FAECES TO MOUTH PATHWAY ARE:

1- Lack of understanding.

2- Not using latrines.

3- Eating together unhygienically.

4- Rubbish.

5- Flies on food.

6- Kacha well water.

7- River or pond water.

TO HELP STOP THIS PATHWAY, TEACH THE COMMUNITY THESE THINGS:

1- If people understand about the problems and what can be done about them, then they can stop this pathway of infection. People should always share their children knowledge with others in the community, men and women.

2- People should always use a latrine if possible and keep it clean. If there is no latrine, then faeces should be covered with earth.

3- Always wash your hands after passing faeces.

4- Always wash your hands before eating or preparing food.

5- If you keep your nails short it is easier to keep your hands clean.

6- Rubbish should be burned.

7- Rubbish which cannot burn should be buried.

8- Always wash fruit or salad vegetables with clean water before eating them.

9- Kill flies whenever possible.

10- Always cover or store food and drinking water to keep off flies and dust.

11- If possible, only drink safe water from pukka wells.

12- If there is no protected water supply boil the water to kill harmful microbes.

PATHWAY OF INFECTION - INSECT

Some diseases can be passed to a healthy person by insects such as flies and mosquitos. Flies feed and breed on dirt, rubbish and faeces. Harmful microbes stick to their bodies then the flies can leave the microbes wherever they walk - in your houses, on your food and on your body. Flies are also linked with the faeces - to - mouth pathway of infection and cán cause the same diseases mentioned on page 10. Mosquitos live and breed in uncovered wells and latrines and pools of stagnant water. A mosquito can carry the microbes which cause malaria (see page 37). When it bites a person with malaria it sucks up some of his blood which contains the malaria microbes. Then the mosquito passes the malaria microbes on to other healthy people when it bites them.

THE CAUSES OF INFECTION BY THE INSECT PATHWAY ARE:

1- Lack of understanding.

2- Flies.

3- Rubbish.

4- Not using latrines.

5- Flies on food.

6- Mosquitos.

7- Stagnant water.

8- Uncovered wells.

TO HELP STOP THIS PATHWAY, TEACH THE COMMUNITY THESE THINGS:

1- If people understand about the problems and what can be done about them then they can block this pathway of infection. People should always share their knowledge with others in the community, men and women.

2- Kill flies whenever possible.

3- Rubbish should be burned so that flies cannot breed and live on it.

4- Rubbish which will not burn should be buried.

5- It is important to use latrines and keep them clean and covered.

6- Cover or store food so that flies cannot walk on it.

7- People should allow the authorities to spray their homes with insecticide as this will kill mosquitos and keep other mosquitos out of the home.

8- Kill mosquitos whenever possible.

9- People should try to sleep under a chaddar or a mosquito net at night.

10- People should fill in all the small stagnant pools of water around their house. They should try to improve the drainage of water away from their homes.

11- Cover all wells and water containers so that mosquitos cannot hide or breed there.

PATHWAY OF INFECTION - CONTACT

Some diseases can be passed to a healthy person by touching a sick or infected person or objects which carry harmful microbes. Examples of diseases which can be passed in this way are skin and eye infections. Tetanus can also be transmitted by this pathway (see page 33).

THE CAUSES OF INFECTION BY THE CONTACT PATHWAY ARE:

1- Lack of understanding.

2- Crowded homes.

3- Unhygienic delivery.

4- Dirty instruments.

5- Dirt on wounds.

6- Bare feet.

7- Pussy eyes.

TO HELP STOP THIS PATHWAY, TEACH THE COMMUNITY THESE THINGS:

1- If people understand about the problems and what can be done about them then they can block this pathway of infection. People should always share their knowledge with others in the community, men and women.

2- Isolate sick people, especially from children and pregnant women.

3- In small homes with large families it is easy for some infections or small insects like scabies and lice to be passed from one person to another by contact. People should try to keep their hair and bodies clean by washing off the dirt and microbes with soap and water everyday.

4- Clothes should be washed with soap frequently at least twice a week, and more often when the weather is hot. Bedding should be washed with soap regularly, at least once a month. Beeding should be laid out in the sunshine everyday to get rid off small insects and smells.

5- It is important for the dais to sterilize the blade by putting them in boiling water before it is used to cut the new born baby's cord.

6- Dais must always carefully wash their hands before and after delivery. (See Causal Chain of Pragnency Problems and Delivery Problems).

7. Keep the cut cord of a baby clean and uncovered so that it does not become infected.

8- It is important to wash hands before and after giving a patient any treatment.

9- The CHW must keep his dressings and equipment clean and always wash instruments and equipment after using them to treat someone.

10- Clean cuts, sores and wounds. (See Procedures Chart about Clean Dressing Procedures).

11- Wear chappels or shoes to prevent hookworms getting in through the feet.

12- Clean pussy eyes carefully and do not rub them with hands or clothes. (See Procedures Chart about Eye Cleaning Procedures).

PATHWAY OF INFECTION - DROPLET

Some diseases can be passed to a healthy person when a person coughs, sneezes or spits. This is because some harmful microbes are thrown out of the person's body. Examples of diseases which can be passed in this way are T.B. (see page 29), whooping cough, diptheria and measles (see page 31).

THE CAUSES OF INFECTION BY THE DROPLET PATHWAY ARE:

1- Lack of understanding.

2- Spitting.

3- Sneezing and coughing.

4- Crowded homes.

TO HELP STOP THIS PATHWAY. TEACH THE COMMUNITY THESE THINGS:

1- If people understand about the problems and what can be done about them then they can block this pathway of infection. People should always share their knowledge with others in the community. men and women.

2- Try and stop spitting. If this is not possible use a spitoon.

3- Burn sputum and clean the spitoon with boiling water to kill the harmful microbes.

4- Never cough or sneeze directly at a person or over food. Turn the head away and cover the mouth.

5- People suffering from coughing diseases like T.B. should be kept away from other people especially pregnant women and children until treated.

CAUSAL CHAIN OF DIARRHOEA

A person has diarrhoea when he/she passes more than 3 watery stools in one day. It is normally caused by a person eating or drinking something contaminated with microbes (See section on Faeces To Mouth Pathway Of Infection, page 10).

The body can usually cure itself and no medicine is needed, but diarrhoea can be a serious problem because it causes dehydration. It can also have a bad affect on growth and lead to malnutrition. Thin, malnourished children get diarrhoea more often than fit, healthy children.

THE CAUSES OF DIARRHOEA ARE:

1- Lack of understanding.

2- Feeding bottles.

3- Kacha well water.

4- River or pond water.

5- Flies on food.

6- Eating together unhygienically.

7- Malnutrition.

8- Not using latrines.

TO HELP PREVENT DIARRHOEA TEACH THE COMMUNITY THESE THINGS:

1- If people understand about the problems and what can be done about them, then they can stop this pathway of infection. People should always share their knowledge with others in the community, men and women.

2- Never bottle feed babies. Breast feed babies from the day that are born until 2 years.

3- Always give plenty of fluids if a person has diarrhoea. (See the Procedures Chart about Sugar and Salt Solution, Oral Rehydration Packets and Quantitites to Drink).

4- If possible, only drink safe water from pakka wells.

5- If there is no protected water supply, boil the water to kill harmful microbes.

6- Always cover food and drinking water to keep off flies and dust.

7- Kill flies whenever possible.

8- Always wash your hands before eating or preparing food.

9- If you keep your nails short it is easier to keep your hands clean.

10- Fruit and salad vegetables should always be carefully washed before being eaten.

11- When children are malnourished they get diarrhoea more easily. Continue to feed children with diarrhoea. Give them good food and give extra food when they recover.

12- Give children a balanced diet so that they can stay strong and healthy.

13 - People should always use a latrine if possible and keep it clean and covered. If there is no latrine then faeces should be covered with earth.

14- Always wash your hands after passing faeces.

N O T E

In order to understand the meaning of the pictures in this book easily, all the pictures were finalized after field testing with many Afghan refugees in different refugee camps in the North West Frontier Province of Pakistan. For simplification and improvement of the pictures, during the field testing, every one's opinion was respected and kept in mind. Moreover, we are heartly thankful to all the refugees who have extended all possible assistance during the field testing.

Regards.

AKHTAR MOHD SHINWARI
Incharge of Teaching Adis.

CAUSAL CHAIN OF DEHYDRATION

Diarrhoea is a common disease which kills many children every year. (see Causal Chain of Diarrhoea, page 18). This is because people do not understand that diarrhoea causes a lot of fluids to be lost from the body. If there is vomiting as well as diarrhoea, dehydration can occur even faster. At first, this fluid loss is not noticeable, but the child will be irritable, have a dry mouth and will feel thirsty.

If the child is not given enough fluid he will grow weaker, loose weight and his skin will lose it's natural elasticity. wrinkled. His eyes will become sunken and the child will pass little urine. His breathing will change. He will cry without tears and the skin over a soft spot on top of his head will sink down. These are all signs of serious and severe dehydration.

If the child still continues to loose fluid and is not given enough to drink to replace this loss then the body will dry up, the child will become very ill and will eventually die. If the weather is hot small children must be given plenty of fluids to drink to prevent dehydration.

People do not understand how the body loses fluid and that it is very important to replace the fluid lost by diarrhoea and they do not understand how much fluid to give to replace the fluid that is lost.

It is possible to prevent children dying from dehydration if people know why the body looses fluid and how they can replace the fluid by giving oral rehydration solution, sugar and salt solution and plenty of other fluids. Regular breast feeding should be continued as long as possible so as to help prevent dehydration.

THE CAUSES OF DEHYDRATION ARE:

1- Lack of understanding.

2- Not giving enough fluid.

3- Fever.

4. Diarrhoea.

TO PREVENT DEHYDRATION, TEACH THE COMMUNITY THESE THINGS:

1- If people understand about the problems of dehydration and what can be done about them, they can prevent dehydration. People should always share their knowledge with others in the community, men and women.

2- It is very important to give lots of fluids to small children especially if a child is sick or the weather is hot.

3- Regular breast feeding continued for as long as possible helps to prevent dehydration in small children.

4- The body looses fluid with diarrhoea. It is important to give enough fluids to drink from the time a child first gets sick. A child will never become dehydrated if he is given enough fluids. (See Procedures Charts about Sugar and Salt Solution, Oral Rehydration Packets and Quantities to Drink with Diarrhoea).

5- The water given to prevent dehydration should be boiled if it is not from a protected source.

6- Always try to persuade sick children to eat by giving a little and often. Spoon feed sick children with soft food or soup.

7- Bottle feeding always causes diarrhoea becuase of the contaminated water used, or the dirty bottle or the stale milk. Mothers should always breast feed their babies from birth until 2 years.

8- Fever causes the body to lose a lot of water as sweat. Cooling fevers reduces this water loss. (See Procedure Charts about Fever Cooling Procedure).

CAUSAL CHAIN OF MALNUTRITION

A thin child is a malnourished child. Any child that does not eat enough food from each of the three food groups becomes thin and weak. These food groups are; (i) body building foods, (ii) energy foods and (iii) prote ctive foods. These children get sick more often because their bodies are too weak to fight infections. A strong child that has been sick will be weak for some time aterwards and needs extra food to help the body get strong again. Food protects the body and gives it the strength to fight harmful microbes.

Frequent diarrhoea causes a child to loose weight and become thin. (See Causal Chain of Diarrhoea, page 18). Thin children get diarrhoea more easily than healthy children. This can become a circle of loosing weight and diarrhoea, until the child is very thin and very weak. Then other infections could kill the child.

CAUSES OF MALNUTRITION ARE:

1- Lack of understanding.

2- Poor diet.

3- Bottle feeding.

4- Diarrhoea.

TO HELP PREVENT MALNUTRITION, TEACH THE COMMUNITY THESE THINGS:

1- If people understand about the problems of malnutrition and what can be done about them, then they can stop malnutrition. People should always share their knowledge with others in the community, men and women.

2- There are three types of food and people need all three types in their meals to grow properly and stay healthy. Malnourished children need extra food.

3- Children should be taken to the BHU for regular weighing from birth until at least 2 years of age. If a child has no weight gain for 2 months something is wrong.

4- Mothers should breast feed babies from birth until 2 years even if they become pregnant again.
Never bottle feed babies because mother's milk is the best food for them. Mothers who are breast feeding should eat for 2.

5- Begin giving weaning foods as well as breast milk after the child reaches 4 months. Feed small children with a clean spoon at least 4 times each day. By the age of 1 year a child should eat all the foods the family eats, made soft.

6- If a child has diarrhoea do not stop feeding. Always feed a sick child a little and often and give extra food when the child recovers.

7- Always give plenty of fluids to children, especially if they have diarrhoea. (See Procedures Chart about Sugar and Salt Solution, Oral Rehydration Packets and Quantities to Drink).

CAUSAL CHAIN OF WORMS

There are many different types of worms which can infect humans. The most common are:

1- Round worms, which live in the gut and eat our food.

2- Hookworms, which live in the gut wall and suck our blood.

3- Threadworms, which live in the gut and eat our food.

All three worms produce eggs which pass out of the body in the faeces, so worm infections are linked with the Faeces to Mouth Pathway of Infection (see page 10). The eggs can only be seen with a special instrument - a microscope. Only roundworms can be seen by the eye. They are sometimes seen in the faeces. All three worms can affect the growth of a child. Hookworms can have a serious effect on health by making a person anaemic and weak. For pregnant women and children this can be very serious.

THE CAUSES OF WORM INFECTIONS ARE:

1- Lack of understanding.

2- Barefeet.

3- Flies on food.

4- Eating together unhygienically.

5- Kacha well water.

6. River or pond.

7. Not using latrine.

TO HELP PREVENT WORM INFECTIONS, TEACH THE COMMUNITY THESE THINGS:

1- If people understand about the causes of worm infections and what can be done about them, then they can prevent worm infections. People should always share their knowledge with others in the community, men and women.

2- Hookworms can develop from eggs in faeces which has been passed on the ground. They can bite through the skin of the feet or buttocks and enter the body this way. If possible, people should always wear sandals and children should sit on mats not on the bare ground.

3- Flies live on faeces and they can carry bits of faeces with worm eggs stuck to their legs. Food and water should be covered or stored to prevent flies getting to it.

4. Kill flies whenever possible.

5- The eggs of worms can be carried on the hands or under the nails of people. People should always wash their hands with soap before preparing or eating food so that eggs cannot be eaten with the food.

6- People should keep their fingernails short and clean.

7- To always use a protected water supply like a pukka or tube well for drinking water if possible.

8- If drinking water comes from an unprotected water supply like a river, katcha well or pond, then it should be boiled to kill any worm eggs.

9- All the family should use latrines if possible and keep them clean so that worm eggs in faeces can not be spread. If there are no latrines, faeces should be covered with earth.

10- People should always wash their hands after passing faeces.

CAUSAL CHAIN OF POLIO

Polio is a disease which mainly affects young children. Not all children who get polio die but if they recover they usually have permanent muscle weakness in some part of the body mainly the legs, arms or chest. The child will never be able to walk properly and his legs or arms will not grow correctly. People affected like this by polio need to go to a hospital to get special help and equipment that will allow them to walk.

THE CAUSES OF POLIO ARE:

1- Lack of understanding.

2- Lack of immunization.

3- Bottle feeding.

4- Not using latrines.

5- Flies on food.

6- Eating together unhygienically.

7- Kacha well water.

8- River or pond water.

TO HELP PREVENT POLIO, TEACH THE COMMUNITY THESE THINGS:

1- If people understand about the causes of polio and what can be done about them, then they can prevent polio. People should always share their knowledge with others in the community, men and women.

2- Polio can be prevented by immunizing children. Teach people that children need to be immunized four times to be completely protected. (See Procedures Chart about Vaccination Procedure).

3- Bottle feeding can cause polio due to dirty water. Mothers should always breast feed and not bottle feed, as breast milk can prevent a child from getting polio.

4- If people have a latrine, use it and keep it clean. If they haven't got a latrine, then faeces should be buried or covered with earth.

5- People should always wash their hands after passing faeces.

6- Flies can leave polio microbes on our food. Always cover or cover food to keep of flies.

7. Kill flies whenever possible.

8- To always wash hands with soap before eating or preparing food. People can get polio by the faeces to mouth pathway of infection (See page 10).

9- Dirt and microbes can easily collect under long fingernails. People should keep their nails short and clean.

10- Polio can be caused by drinking dirty water. If possible people should use a protected water supply like a pukka well or tube well for drinking water.

11- Water from katcha wells, rivers, ponds or canals should be boiled to kill polio microbes before it is used for drinking.

CAUSAL CHAIN OF TUBERCULOSIS (T.B.)

T.B. is a long-lasting disease of the lungs and other parts of the body. It kills many people each year, but it can be cured by taking a course of special drug for 8 months or 12 months. TB can be prevented by immunization.

The person with TB carries the harmful microbes in his lungs. He can spread the disease by sneezing or coughing in the face of another person. If he spits on the ground, the sputum will dry up but the microbes will escape into the air for other people to breathe them in.

Malnourished or sick people are more likely to get T.B. The T.B. microbes spreads more easily when people live in over-crowded conditions.

THE CAUSES OF TUBERCULOSIS ARE:

1- Lack of understanding.

2- Lack of immunization.

3- Sneezing and coughing.

4- Spitting.

5- Poor nutrition.

6- Crowded homes.

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TO HELP PREVENT T.B. TEACH THE COMMUNITY THESE THINGS:

1. If people understand about the problems and what can be done about them, they can prevent T.B. People should always share their knowledge with others in the community, men and women.

2. Immunize all children with BCG vaccine in the first month of life (See Procedure Chart about Vaccination Procedure).

3. Never cough or sneeze directly at a person or over food. Turn the head away and cover the mouth and nose.

4. Try to stop spitting. If this is not possible, use a spitoon.

5. Burn sputum and clean the spitoon with boiling water.

6. Children should be breast-fed from birth until they are 2 years old.

7. Weaning food should be given after 4 months as well as breast milk. Small children should be fed with a spoon, a little and often, at least 5 times per day.

8. People should have a balanced and adequate diet.

9. People who have a coughing disease should stay away from other people in the house, especially pregnant women and children, until they have started their treatment. Any people living in the same house as a person with TB should be referred to the BHU, as they may also have the disease.

CAUSAL CHAIN OF DIPTHERIA, WHOOPING COUGH AND & MEASLES:

There are three serious diseases which are very dangerous for children. They can cause health problems that a child will always have. They can cause death.

These diseases can be completely prevented by vaccination. Doctors have found that the vaccines for diptheria and whooping cough can be combined with the vaccine for tetanus as one mixed vaccine, called D.P.T. vaccine. The vaccine for measles is a separate vaccine. these vaccines are given by injection.

In order for vaccines to be able to protect the body, it is essential that the correct number of injections are given at the correct time (See Procedures Chart about Vaccination Procedure for details). If a full vaccination programme is not completed then a child will not be protected against these diseases.

THE CAUSES OF DIPTHERIA, WHOOPING COUGH AND MEASLES ARE:

1- Lack of understanding.

2- Lack of immunization.

3- Crowded homes.

4- Spitting.

5. Coughing and sneezing.

TO HELP STOP THESE DISEASES, TEACH THE COMMUNITY THESE THINGS:

1. If people understand about the causes of diptheria, whooping cough and measles and what can be done about them, and especially about vaccination, then they can prevent these diseases. People should always share their knowledge with others in the community, men and women.

2. Children should always be vaccinated according to the standard Vaccination Procedure for all children. To prevent whooping cough and diptheria 4 injections of DPT vaccine are needed. To prevent measles one vaccination is needed. (See Procedures Chart about Vaccination Procedure).

3. Isolate people who are sick. Do not allow other peopl near them, especially children and pregnant women.

4. Try not to spit. If this is not possible, do not spit on the ground, use a spitoon.

5. Burn the sputum and wash the spitoon with boiling water regularly.

6. Never cough or sneeze directly at a person or over food or drink as this spreads microbes. Turn the head away and cover the mouth.

CAUSAL CHAIN OF TETANUS

Tetanus is a very serious disease which is difficult to cure. Most people who get tetanus will die. It is caused by tetanus microbes getting into the body and producing poison. Tetanus need never occur in your community if all children, and women, especially pregnant women, and anyone with dirty wounds are immunized against tetanus. (See also Causal Chain of Pregnancy Problems and Delivery Problems, page 35).

THE CAUSES OF TETANUS ARE:

1- Lack of understanding.

2- Lack of immunization and antenatal care for women.

3- Unhygienic delivery.

4- Lack of immunization for children.

5- Dirt on wounds.

6- Dirty instruments.

TO HELP PREVENT TETANUS TEACH THE COMMUNITY THESE THINGS:

1. If men and women understand about problems of tetanus and what can be done about them, then they can prevent tetanus. People should always share their knowledge with others in the community especially women.

2. Allow the women who help deliver babies to train as family dais. This training is simple and will improve their skill at delivery. It will also help them to teach women how to look after their babies and keep them healthy.

3. All women, especially pregnant women, should go to the BHU to be vaccinated against tetanus. This will protect the woman and the new born child.

4. Husbands should allow on experienced dai to help deliver the babies. Dais should wash their hands and clean their nails before helping at a delivery.

5. Dais must prepare a clean area for the delivery and they must use a sterilized blade (or scissors) for cutting the cord and sterilized string for tying it.

6. The cut cord must be kept clean and uncovered to prevent infection. (See Causal Chain of Pregnancy Problems and Delivery Problems).

7. All children should be immunized 4 times against tetanus. (See Procedures Chart about Vaccination Procedure).

8. Dirty wounds can easily be infected with tetanus. Always clean dirty cuts and wounds. (See Procedures Chart about Clean Dressing Procedures). Refer anyone with a dirty wound to the doctor to ask if they should be immunized against tetanus.

9. Always wash hands with soap before and after giving someone treatment.

10. Dirty instruments can cause tetanus. Equipment should always be kept clean and it should always be washed after it has been used to treat someone.

CAUSAL CHAIN OF PREGNANCY PROBLEMS AND DELIVERY PROBLEMS

Pregnant women, new born babies and women who have just had a baby can easily become sick. They need special care and help.

THE CAUSES OF PREGNANCY PROBLEMS AND DELIVERY PROBLEMS ARE:

- Lack of understanding.
- Lack of immunisation and antenatal care.
- Physical work.
- Poor diet.
- Unhygienic delivery.

TO HELP PREVENT PREGNANCY PROBLEMS AND CHILDBIRTH PROBLEMS, TEACH THE COMMUNITY THESE THINGS:

1- If men and women understand about the problems and what can be done about them then they can prevent these problems. People should always share their knowledge with others in the community especially women.

2- Allow the older women who help to deliver babies to train as family dais. This training is simple and will improve their skill at delivering babies. It will also help them to teach women how to look after their babies and keep them healthy.

3- Pregnant women should go to the BHU to be vaccinated before delivery to protect them against tetanus. This will also protect the newborn child.

4- Pregnant women should be examined by Dais, LHVs or Doctors to check if there are any problems.

5- Pregnant women should not do heavy manual work, especially after 6 months of pregnancy. They should take more rest than usual.

6- It is important that women get extra food and eat all three types of food when they are pregnant and when they are breast feeding. They should eat plenty of meat, vegetables and fruit and drink plenty of milk and fluids so that they will stay strong and healthy. This allows the baby to grow healthily as well.

7- Husbands should allow an experienced dai to help deliver the babies. Dais should clean their hands and nails before delivery.

8- Dais must prepare a clean area for the delivery. They must use a sterilized blade for cutting the cord, and a sterilized cord for tying it.

9. The cut cord of the new born baby must be kept clean and uncovered so that it does not become infected.

CAUSAL CHAIN OF MALARIA

Malaria is caused by a microbe carried by mosquitos. These microbes can pass into the body when a mosquito bites a person to suck blood. The microbes get into the blood and feed on the blood and produce poison.

Malaria causes shivering, fever and sweating. The fever should be cooled (see Procedure Charts about Fever Cooling Procedure), but anyone with these symptoms should be referred to the BHU to give a drop of blood for testing. The doctor will then know if the person has malaria and if so what type of medicine is neeed. All the medicine should be taken. If a person stops when he feels well then not all the malaria microbes will be killed and the malaria will return in a few months.

We can try to stop mosquitos biting us but the best way to prevent malaria is to try and stop the mosquitos breeding. It is very difficult to prevent malaria in the community completely but it is possible to greatly reduce the amount of malaria in the community.

THE CAUSE OF MALARIA ARE:

1- Lack of understanding.

2- Mosquitos.

3- Stagnant water.

4- Uncovered wells.

TO HELP REDUCE MALARIA, TEACH THE COMMUNITY THESE THINGS:

1- If people understand how malaria is caused and about mosquitos they can help to reduce the amount of malaria in the community. People should learn how to manage malaria properly by fever colling, referral for blood testing and taking all their medicine. People should share their knowledge with others in the community, men and women.

2- Kill mosquitos whenever possible.

3- Allow the authorities to spray houses and tents with insecticide as this will help to kill mosquitos.

4- If possible, at night sleep under a chaddar or mosquito net.

5- To always fill in stagnant water pools and to try to improve water drainage around the house so that mosquitos cannot breed in stagnant water near houses.

6- To always cover wells, water jars and latrines where mosquitos can hide or breed.

CASUAL CHAIN OF ACCIDENTS

Many people especially children get injured or killed due to accidents. There are very many different types of accidents which can occur in the community or in the home but some types of accidents are common and can easily be prevented.

THE CAUSES OF ACCIDENTS ARE:

1- Lack of understanding.

2- Road accidents.

3- Water accidents.

4- Fire accidents.

5- Poison accidents.

6- Dangerous object accidents.

FOREWORD

The objective of this book is to explain in simple pictures the cause and effect of diseases and health problems commonly found in communities and to show what interventions are possible. The individual drawings are combined to represent chains that show how diseases and health problems occur and what people can do to break these chains and so help control or prevent these diseases and health problems.

The teaching aids and methodologies associated with this book have been developed to train people who cannot read and write. However the people in the communities who can read requested that a written explanation be included so that they can read it to others and so that their children can also learn to read from the book.

It is hoped that this book will stimulate discussion in the community to raise the level of health knowledge so that people learn to accept the responsibility of trying to control or prevent diseases themselves and work towards improving their environment and the health of the whole community.

This book is based on a previous causal chain book written by Angela Brown and Maggie Usher. It reflects developments in causal chain teaching aids.

PHILIP APPLETON
Health Education & Training Adviser
S.C.F. (U.K.) Peshawar.

TO HELP PREVENT ACCIDENTS, TEACH THE COMMUNITY THESE THINGS:

1- If people understand the main causes of accidents then they can prevent many of the accidents which occur in the community. People should always share their knowledge with others in the community, both men and women.

2- People should always listen and look in both directions before crossing the road.

3- Small children should not be allowed near deep water alone and should be taught how to swim if possible.

4- People should be very careful with cooking fires, kerosene stoves and lamps. Small children should be kept away from places or things which could cause burn accidents.

5- Things which are dangerous for children to eat or drink should be kept in a safe place where children cannot get them.

6- If people wear sandals this will prevent many injuries of the feet. Broken glass, tins and other rubbish which will not burn should always be buried. Knives, sharp tools and guns should be stored in a safe place where children cannot get them.

HOW TO USE THIS BOOK

The main purpose of this book is to help Community Health Workers (CHWs) to teach people how to control and to prevent diseases in their community. It is designed to reinforce the lessons the CHWs have been taught and should be used by the CHW to help him to remember the important facts he must teach people. The CHW should also use this book to create an awareness and understanding in the community by taking it with him on home-visits to show the families he is working for. This will help them to learn better what he is trying to teach. In addition it can be used as a memory aid for trainers of CHWs when preparing their lessons and as a teaching aid for training CHWs.

To use this book it does not matter whether a CHW can read or not. Each picture has a meaning and the chain and triangle pictures together illustrate the causal chains of diseases and health problems, and also the pathways of infection. The pictures should be looked at from right to left as numbered, the same as if reading Pushtu.

A CHW is a teacher and he should share the knowledge and understanding he gets from his training with the community. He should teach people why diseases and health problems occur in the community and how to help to control and prevent them in the community.

The CHW should teach people what each of the pictures mean and explain that the chain pictures demonstrate the problems that combine together to allow a pathway of infection, disease or health problem to occur. The triangles teach people how to break the links in the chain. The triangle is also the symbol of the CHW.

Remember that people may not have all the facilities and resources to break every link in the chain. For example, people may not have latrines or access to pukka wells. Do not tell people to do things they cannot do, but teach them to break the chain wherever it is possible. People can always learn to break some links in the chain and even this will help reduce the amount of disease or health problems in the community.

People who can read should read the explanations of the chain and triangle pictures for the causal chains and pathways of infection. They should always find and read any references to other pages or to the Procedures Book given in the text immediately after reading about a pathway of infection or causal chain.

ALWAYS TEACH PEOPLE:

1) WHY A DISEASE OR HEALTH PROBLEM OCCUR.

2) HOW TO MANAGE THE DISEASE OR INJURY IN THE HOME.

3) WHEN TO GO TO THE BASIC HEALTH UNIT.

4) HOW THEY CAN HELP TO CONTROL OR PREVENT DISEASES AND HEALTH PROBLEMS IN THEIR COMMUNITY.

GUIDE TO THE PICTURES

A- CHAIN PICTURES:

These pictures all represent problems which can affect the health of people in the community.

1- Microbes

2- Flies

3- Mosquitos

4- Worms

5- Diarrhoea

6- Polio

7- Tetanus

8- T.B.

9- Fever

10- Dehydration

11- Malnutrition

12- Pregnancy and delivery problems

13- Accidents

14- Lack of understanding

15- Not using latrines

16- Eating together unhygienically

17- Flies on food

18- Poor diet

19- Bottle feeding

20- Katcha wells

21- River, canal and pond water

22- Stagnant water

23- Rubbish

24- Crowded homes

25- Physical work for pregnant women

26- Unhygienic delivery

27- Lack of immunization and ante-natal care for women

28- Lack of immunization for children

29- Dirt on wounds

30- Dirty instruments

31- Bare feet

32- Pussy eyes

33- Spitting

34- Sneezing and coughing

35- Road accidents

36- Water accidents

37- Fire accidents

38- Poison accidents

39- Dangerous object accidents

TRIANGLE PICTURES:

The triangle is the symbol of the CHW. These pictures all represent things which the CHW can do or teach about to help counteract the problems represented by the chain pictures and so help improve the health of the people in the community.

1- Teaching the community

2- Using latrines properly and keeping them clean

3- Washing hands with soap after using latrine

4- Washing hands with soap before eating

5- Cutting nails short

6- Covering food from flies and dirt

7- Washing fruit and salad vegetables

8- Balanced diet with enough food from all 3 food groups

9- Breast feeding children until 2 years old

10- Giving food a little and often for sick children

11- Begin giving weaning foods after a child reaches 4 months. By the age of 1 year the child should be eating the same food as the family made soft at least 4 times per day.

12- Weighing small children regularly until 5 years old

13- Pukka wells with covers

14- Boiling unsafe water before drinking

15- Giving enough fluids and ORS to prevent dehydration

16- Cooling fever

17- Filling in places with stagnant water

18- Cooperating with mosquito spraying programmes

19- Sleeping under a chaddar or mosquito net

20- Killing mosquitos and flies

21- Burning rubbish

22- Burying rubbish which does not burn

23- Isolation of sick person

24- Washing the body at least twice a week

25- Washing clothes at least once a week

26- Allowing pregnant women to take extra rest and not allowing pregnant women to do physical work

27- Dai training.

28- Dai washing hands and nails with soap before a delivery.

29- Hygienic delivery with sterilized equipment.

30- Keeping the baby's cut cord clean and uncovered.

31- Tetanus vaccination for women, especially if pregnant.

32- Ante-natal examination.

33- Vaccination for children.

34- Washing wounds.

35- Washing instruments and equipment after use.

36- Washing hands with soap after giving treatment.

37- Wearing chappals.

38- Cleaning pussy eyes hygienically.

39- Using a spitoon.

40- Burning sputum.

41- Not sneezing or coughing directly at another person.

42- Crossing roads safely.

43- Keeping children who cannot swim away from water.

44- Keeping children away from fires.

45- Keeping poison and medicine away from children.

46- Keeping dangerous objects away from children.

21.3

Book of Pathways of Infecion and Causal Chains for Community Health Workers

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and

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